

Notice of Allowability

Application No.

10/074,751

Examiner

Charles Kim

Applicant(s)

CAI, LYNN

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to submissions received on February 13, 2002.
2. ☒ The allowed claim(s) is/are 1-28.
3. ☒ The drawings filed on 13 February 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.


5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 12/6/02
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Jon Chang
Primary Examiner

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Edward Grundler (Registration No. 47,615) on November 17, 2004. The application has been amended as follows:

In the claims:

In claim 22, line 13, insert --said-- before "creating means"

In claim 22, line 14, insert --said-- before "choosing means"

In claim 22, line 16, insert --said-- before "determining means"

In claim 22, line 19, insert --said-- before "locating means"

In claim 23, line 2, insert --said-- before "creating means"

In claim 23, line 4, insert --said-- before "choosing means"

In claim 23, line 6, insert --said-- before "creating means"

In claim 23, line 8, insert --said-- before "choosing means"

In claim 23, line 10, insert --said-- before "creating means"

In claim 23, line 12, insert --said-- before "choosing means"

In claim 23, line 18, insert --said-- before "creating means"

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In claim 23, line 20, insert --said-- before "choosing means"

In claim 23, line 25, insert --said-- before "aligning means"

In claim 23, line 28, insert --said-- before "aligning means"

In claim 24, line 1, insert --said-- before "aligning means"

In claim 25, line 1, insert --said-- before "aligning means"

In claim 28, line 4, insert --said-- before "choosing means"

Prior Art

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Hennessey et al. U.S. Patent No. 5,696,835 discloses a method for alignment of images for defect inspection, wherein the alignment is based on horizontal and vertical features (primitives) of the images.

b. Green U.S. Patent No. 4,475,122 discloses an automatic wafer alignment method based on horizontal and vertical features (figure 4).

c. Chen et al. U.S. Patent No. 6,330,355 discloses a method for aligning two images based on horizontal and vertical features.

d. Eran et al. U.S. Patent Application Publication No. 2003/0174876 discloses a method for measuring line widths of an image using an inspection tool.

e. Ki et al. U.S. Patent Application Publication No. 2003/0068565 discloses a method for measuring thickness uniformity of a pattern in a wafer image (figure 5).

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance: The essential difference between the claimed invention and the prior art is the step of choosing a vertical and horizontal feature in the image having a specified width along the horizontal and vertical cut lines respectively, determining that the vertical feature maintains the specified width over a specified range above and below the horizontal cut line, and determining that the horizontal feature maintains the specified width over a specified range left and right of the vertical cut line. These features in combination with the other elements of the claim and the base claim are not disclosed or suggested by the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 703-306-4038. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ck

November 18, 2004


Jon Chang
Primary Examiner
